In the Claims:

Please amend claims 1-3, 5-6, 8, and 13-17 as indicated.

1.   (Currently amended)   A medical decision support system, comprising:

a processor;

a memory device;

a first input module ~~device~~ for acquiring gene expression data, said first input module ~~device~~ operably connected to a first classifier/predictor module to classify said gene expression data and to derive a prediction from said gene expression data; and

a second input module ~~device~~ for acquiring clinical information, said second input module ~~device~~ operably connected to a second classifier/predictor module to classify said clinical information and to derive a prediction from said clinical information,

said memory device having software to combine said prediction derived from said classified gene expression data and said prediction derived from said classified clinical information to predict ~~produce a prognosis of~~ an outcome of a disease or its treatment.

2.   (Currently amended)   The system of claim 1, further comprising an output module ~~device~~.

3.   (Currently amended)   A method for evaluating a medical decision, comprising the steps of:

(a)   using a first classifier/predictor module to classify gene expression information and to derive a prediction from said gene expression data;

(b)   using a second classifer/predictor module to classify clinical information and to derive a prediction from said clinical information; and

(c)   combining said prediction derived from said classified gene expression information and said prediction derived from said classified clinical information to predict ~~produce a prognosis of~~ an outcome of a disease or its treatment.

4.   (Previously presented)   The method of claim 3, wherein said steps (a) and (b) include at least one of an evolving fuzzy neural network (EFuNN) process and a Bayesian process.

5.   (Currently amended)   A computer system comprising:

a processor; and

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a memory device having classified gene expression information and classified clinical information stored thereon, said memory device having software to combine <u>a prediction derived from</u> said classified gene expression information and <u>a prediction derived from</u> said classified clinical information to <u>predict</u> ~~produce a prognosis of~~ an outcome of a disease or its treatment.

6.   (Currently amended)   The computer system of claim 5, further comprising software to predict an outcome based on <u>said prediction derived from said</u> combined classified gene expression information and <u>said prediction derived from said</u> clinical information stored on said memory device.

7.   (Canceled)

8.   (Currently amended)   <u>The</u> [[A]] system <u>of claim 1, further</u> ~~for predicting a medical outcome,~~ comprising:
        ~~a first input device to receive gene expression data;~~
        ~~a second input device to receive clinical information;~~
        a class unit layer comprising at least two classes of interest into which items of said gene expression data and items of said clinical information are sorted;
        a classifier module layer comprising at least two classifier modules, a gene expression data classifier module operably connected to said first input device and operably connected to each of said at least two classes, and a clinical information classifier module operably connected to said second input device and operably connected to each of said at least two classes; and
        a decision layer operably connected to each of said two classes and operably connected to an output device.

9.   (Previously presented)   The system of claim 8, wherein said decision layer comprises software to combine results from at least two of an EFuNN process, a Bayesian process, a neural network module, a support vector machine, a rule-based system, a decision tree and a statistical method.

10.   (Previously presented)   The system of claim 8, wherein output of said output device comprises at least one of a diagnosis, an evaluation of a clinical condition and an evaluation of a patient outcome.

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11. (Previously presented) The system of claim 8, wherein at least one of said classifier module layer and said decision layer comprise at least one of an evolving connectionist system (ECoS) and an evolving classification function (ECF).

12. (Previously presented) The system of claim 11, wherein said decision layer further comprises an EFuNN.

13. (Currently amended) The [[A]] method of claim 3, wherein for predicting a medical outcome, comprising:

receiving gene expression data input into a first input device;

receiving clinical information input into a second input device;

said step (a) of using a first classifier/predictor module comprises using providing a class unit layer comprising at least two classes of interest into which items of said gene expression data and items of said clinical information are sorted;

said step (b) of using a second classifier/predictor module comprises using providing a classifier module layer comprising at least two classifier modules, a gene expression data classifier module operably connected to said first input device and operably connected to each of said at least two classes, and a clinical information classifier module operably connected to said second input device and operably connected to each of said at least two classes;

and said step (c) of combining comprises using providing a decision layer operably connected to each of said two classes and operably connected to an output device; and

said step (c) of combining further comprises processing input from said at least two classes in said decision layer to predict produce a pediction of a medical outcome.

14. (Currently amended) The method system of claim 13, wherein said step of using providing a decision layer comprises using providing software to combine at least two of an EFuNN process, a Bayesian process, a neural network module, a support vector machine, a rule-based system, a decision tree and a statistical method.

15. (Currently amended) The method system of claim 13, wherein output of said output device comprises at least one of a diagnosis, an evaluation of a clinical condition and an evaluation of a patient outcome.

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16.   (Currently amended)   The <u>method</u> ~~system~~ of claim 13, wherein at least one of said classifier module layer and said decision layer comprise at least one of an ECoS and an ECF.

17.   (Currently amended)   The <u>method</u> ~~system~~ of claim 16, wherein said decision layer further comprises an ~~evolving fuzzy neural network~~ EFuNN.

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